CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION

HYDROLOGY SECTION PROJ. NO. J-14 DATE: 8/9/83

PLANNING DIVISION NO. _____

CONFERENCE RECAP

SUBJECT: City/County Office Building

ATTENDANCE:	WHO	REPRESENTING
	Tim Jaramillo	
	Fred J. Aguirre	

FINDINGS:

1. Site plan with the proposed roof drain connection to the City storm drain system in 5th St. "Private Storm Drain Improvements within City Rights-of-Way and Easements" plans appropriate for connection to the City storm drain system. Referenced document can be found in Section 22.7, page 120 in the Development Process Manual.

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED:	SIGNED:
TITLE: City Engineer	TITLE: Project Coordinator
DATE: 8/9/83	DATE: 8/9/83

LEEDSHILL-HERK..HOFF, INC.
500 Copper Avenue N.W.
P. O. Box 1217
Albuquerque, New Mexico 87103
(505) 247-0294

1763-1866.21-83

RECEIVED

NOV 23 1983

DEAN & HUNT ASSOC. LTD.

November 22, 1983

Mr. Q. R. Kielich
Design Engineering
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

RE: City/County Building Special Order No. 19

Dear Mr. Kielich:

Transmitted herewith are the mylar originals and three sets of prints for the above referenced Special Order No. 19. Please call me if there are any questions.

Sincerely,

JoAnn Azar-English

JOANN AZAR-ENGLISH

bz

Enc.

cc: Gene Hunt, Dean & Hunt

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

READING FILE

November 23, 1983

Art Montoya
W.C. Kruger and Associates
1100 First Interstate Bank Building
Albuquerque, NM 87102

REF: CITY/COUNTY MUNICIPAL OFFICE BUILDING (J14-D30A)

Dear Mr. Montoya:

The referenced drainage plan has been reviewed and the following are my comments:

1. The inflow discharges to the proposed storm drains (8" CIP, 12" CIP, 15 RCP) indicates the subject S.D.'s will be operating under pressure flow; however, the report makes no provisions for such a condition. Please provide the required hydraulic calculations to evaluate the proposed storm drain system.

BACKWATER VALVES ON CONSTRUCTION

ALREADY SUBMITTED

✓2. Provide invert elevations for the storm drain, provide grate and invert elevations for the catch basins.

✓3. Provide finished floor and basement elevations.

✓4. The proposed construction within the City's R/W requires a "Construction Within Public R/W" Document. Please include this document with your resubmittal.

✓5. Include Engineer's stamp with signature and date on the drainage plan.

If you have any further questions or comments on the above referenced site, please feel free to contact me at 766-7644.

Sincerely,

Fred J. Aguirre
Design Hydrologist

FJA:mrk

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

FILE COPY

December 19, 1983

Mr. Art Montoya
W. C. Kruger & Associates
1100 First Interstate Bank Building
Albuquerque, New Mexico 87102

RE: CITY/COUNTY OFFICE BUILDING DATED DECEMBER 7, 1983 (J14-D30A)

Dear Art:

The referenced drainage plan is in accordance with our meetings, therefore, this plan is approved.

If you should have any further questions please feel free to contact me at 766-7644.

Yours truly,

Fred Aguirre
Design Hydrologist

FA/ca

TO: Hydeology Dept.
Code Administration
City of Albuquerque NM

FROM:

SPEED MESSAGE

DATE 9/10/85

western empire constructors, inc.
4200 OSUNA ROAD NE • SUITE 100
ALBUQUERQUE, NEW MEXICO 87109 • PHONE: 505/345-2501

SUBJECT City/County Bldg. Roof Drain Storm Sewer

MESSAGE:

This is a note to say that storm sewer/roof drain connection from building to street invert was duly inspected by full time inspectors hired by Intergovernmental Committe for full time inspection at City/County Building.

Name of inspectors ~~Ed~~. Larkin Trosper
Harold Ryder (substitute)

Harold T. Ryder
SIGNED

REPLY:

SIGNED

CRS

CRS SIRRINE

114-030A

use Marquette
on Civic Plaza

August 5, 1985

City of Albuquerque
Hydrology Department
123 Central Avenue, NW
2nd Floor
Albuquerque, N.M. 87103

Dear Sirs:

We will be requesting a temporary Certificate of Occupancy in a few days at the request of the city, so that they may begin moving their computer equipment into the new City/County Office Building.

In view of this I would like you to know that we are going to finish the curb, gutter, sidewalk, and all other site work by September 1, 1985 with the exception of the asphalt work which must wait until the skywalk is complete.

If I can be of any assistance, please call.

Sincerely,

Bob H. Rogers

Bob H. Rogers
Project Manager

BHR:cr

Western Empire Constructors, Inc.
4200 Osuna Road, N.E., Suite 100
Albuquerque, New Mexico 87109
505 345-2501

A CRS Sirrine, Inc. Company

CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

INTER-OFFICE CORRESPONDENCE REF. NO._____

August 30, 1985

TO: Barry Simmons, Sr. Civil Engineer; Engineering Division

FROM: Fred J. Aguirre, Design Hydrologist; Engineering Division

SUBJECT: CITY/COUNTY BUILDING - SPECIAL ORDER NUMBER 19 (J-14/D30A)

Per your request, please find attached a copy of the unsigned Special Order 19.

Please provide the as-built conditions on the Special Order 19 and forward a copy to Bernie Montoya and Greg Olson.

FJA/bsj

Attachment

City/County Municipal Office Building
City of Albuquerque County of Bernalillo
Albuquerque, New Mexico

DRAINAGE PLAN

Prepared By:

BRIDGERS AND PAXTON CONSULTING ENGINEERS, INC.
213 TRUMAN STREET N. E.
ALBUQUERQUE, NEW MEXICO 87108

OCTOBER, 1983

TABLE OF CONTENTS

SITING

Location: The new permanent building site location is bounded by Fifth Street N.W. on the west, existing City Hall on the north, the existing Civic Plaza on the east and the Bernalillo County Courthouse on the south. Approximately 180 feet (north/south) x 272 feet (east/west) for 1.12 acres, more or less.

Existing Conditions: The existing site is mostly paved parking with concrete sidewalks and includes one long narrow planter. Storm drainage is controlled with four catch basins and 15 R.C.P. storm drains which discharge off-site into the storm sewer at Marquette N.W. This on-site storm drain system also handles roof drain flow from the City Hall and the Bernalillo County Courthouse.

In addition, an existing 6-inch force main from the Bernalillo County Courthouse discharging well water at approximately 600 gpm to an off-site storm drain catch basin on Tijeras Avenue N.W. exists on the site.

Developed Conditions:

A. New Permanent Structure:

Roof Area = Drainage Area No. 5	=	0.7 Acres
Ground Floor Elevation	=	4,956.58
Street Elevation	=	4,953.0±
Basement Elevation	=	4,941.05
Roof Elevation	=	5,101

B. Proposed site storm drainage plan developed for new permanent structure utilizing existing on-site and off-site storm drainage facilities.

C. The proposed site storm drainage plan will consist of two separate systems:

1. Storm Drainage System No. "A": Drainage Area "A" consisting of five area drains will collect by gravity flow to the new pump station which will discharge approximately 400 gpm, through a new and existing 6-inch waste water force main to the existing off-site storm sewer on Tijeras Avenue.

2. Storm Drainage System No. 1-7: Drainages areas No. 1 through No. 7 will be collected by gravity flow and discharge approximately 6.94 cfs to the existing off-site storm sewer on Marquette Avenue.

STORM DRAINAGE CALCULATIONS

Runoff Volumes Determination:

From the Rational Formula $Q = C\ I\ A$

Q = Peak Discharge of drainage area in c.f.s. due to a 100-year storm.

C = Rainfall runoff coefficient (refer to Plate 22.2 C-2, Chapter 22, page 9)*

I = Rainfall intensity in inches/hour (refer to Plate 22.2 D-2, Chapter 22, page 14)*

6 Hour Rainfall Volume for 100 Year Storm (Refer to Plate 22.2 D-1, Chapter 22, page 13)*

T_c = Time of Concentration (refer to Chapter 22, page 3)*

V = Average Velocity (refer to Chapter 22, page 3)*

* Indicates data derived from City of Albuquerque Development Process Manual No. 2

Calculations:

Drainage Area "A": 0.154 Acres

C = .98 (Impervious Conc. Pad)

Elevation Difference = 0.8 Feet

Distance = 46 Feet

Slope = 1.74%

T_c = 10 Minutes

6-Hour Rainfall 100 Year Frequency = 2.3 Inches

Therefore, I = 2.3" x 2.17 = 4.99 Inches

Q = C I A

Q = .98 x 4.99 x 0.154

Q = 0.753 cfs = 338 gpm

Drainage Area "1": 0.178 Acres

C = 0.98 (Impervious Conc. Pad)

Elevation Difference = 0.20 Feet

Distance = 54 Feet

Slope = 0.37%

T_c = 10 Minutes

6-Hour Rainfall 100 Year Frequency = 2.3 Inches

Therefore, I = 2.3" x 2.17 = 4.99 Inches

Q = C I A

Q = 0.98 x 4.99 x 0.178

Q = 0.87 cfs = 391 gpm

Drainage Area "2":

Existing Courthouse Roof Drain

0.03 Acres = 1,340 square feet

C = 0.98 (Impervious Roof)

Slope = 1%

Distance = 97 Feet

T_c = 10 Minutes

6-Hour Rainfall 100 Year Frequency = 2.3 Inches

I = 2.3" x 2.17 = 4.99 Inches

Q = C I A

Q = 0.98 x 4.99 x 0.03

Q = 0.147 cfs = 66 gpm

Drainage Area "3":

Existing Courthouse Roof Drain

0.03 Acres = 1,340 square feet

C = 0.98 (Impervious Roof)

Slope = 1%

Distance = 97 Feet

T_c = 10 Minutes

6-Hour Rainfall 100 Year Frequency = 2.3 Inches

I = 2.3" x 2.17 = 4.99

Q = C I A

Q = 0.98 x 4.99 x 0.03

Q = 0.147 cfm = 66 gpm

Drainage Area "4": 0.142 Acres

C = 0.98 (Conc. Pad)

Elevation Difference = 0.20 Feet

Distance = 87 Feet

Slope = 0.23%

T_c = 10 Minutes

6-Hour Rainfall 100 Year Frequency = 2.3 Inches

Therefore, I = 2.3" x 2.17 = 4.99 Inches

Q = C I A

Q = 0.98 x 4.99 x 0.142

Q = 0.694 cfs = 312 gpm

Drainage Area "5": 0.695 Acres

C = 0.98 (Roof)

Distance = 40 Feet

Slope = 1.00%

T_c = 10 Minutes

6-Hour Rainfall 100 Year Frequency = 2.3 Inches

I = 2.3" x 2.17 = 4.99 Inches

Q = C I A

Q = 0.98 x 4.99 x 0.695

Q = 3.40 cfm = 1,525 gpm

Drainage Area "6": 0.078 Acres

C = 0.98 (Conc. Pad)

Elevation Difference = 56.55 - 56.31 = 0.27 Feet

Distance = 20 Feet

Slope = 1.35%

T_c = 10 Minutes

6-Hour Rainfall 100 Year Frequency = 2.3 Inches

Therefore, I = 2.3" x 2.17 = 4.99 Inches

Q = C I A

Q = 0.98 x 4.99 x 0.079

Q = 0.386 cfs = 173 gpm

Drainage Area "7": 0.267 Acres

Existing City Hall Roof

C = 0.98 (Impervious Roof)

Slope = 1.00%

Distance =

T_c = 10 Minutes

6-Hour Rainfall 100 Year Frequency = 2.3 Inches

Therefore, I = 2.3" x 2.17 = 4.99 Inches

Q = C I A

Q = 0.98 x 4.99 x 0.267

Q = 1.306 cfs = 586 gpm

CALCULATIONS FOR RUNOFF DETERMINATION 100 YR. | CONP. BY R.G. GIDDINGS | DATE OCT. 20, 1983

PROJECT CITY/ COUNTY

FROM PIPE INLET		TO PIPE OUTLET		DATA						CALCULATIONS -						
LOCATION	INVERT ELEVATION	LOCATION	INVERT ELEVATION	A$_d$ acres	C	C·A$_d$ acres	Σ C·A$_d$	t_c min.	I in/hr.	Q c.f.s.	PIPE SIZE n=0.012	Q full c.f.s.	S ft/ft	Vel ft/sec.	L ft.	
D.A. # 1				0.178	0.98	0.174		10	4.99	0.87						
	4951.10		4950.96				0.174			0.87	8	0.87	0.004	2.4	35	
D.A. # 2				0.03	0.98	0.029		10	4.99	0.145						
	4950.96		4950.82				0.203			1.013	8"	0.87	0.004	2.4	34	
D.A. # 3				0.03	0.98	0.029		10	4.99	0.145						
	4950.72		4950.42				0.232			1.158	10"	1.49	0.004	2.8	76	
D.A. # 4				0.142	0.98	0.139		10	4.99	0.694						
	4950.34		4949.80				.371			1.851	12"	3.84	0.004	3.1	106	
D.A. # 5				0.695	0.98	0.681		10	4.99	3.40						
	4949.68		4949.39				1.052			5.249	15"	4.46	0.004	3.7	74	
D.A. # 6				0.078	0.98	0.076		10	4.99	0.381						
	4949.39	M.H.	4949.06				1.128			5.553	15"	4.46	0.004	3.7	81	
D.A. # 7				0.267	0.98	0.262		10	4.99	1.307						
M.H.	4948.96	M.H	4948.77				1.39			6.94	15"	2.90	.0026	2.34	72	EXIST. PIPE
D.A. # A				0.154	0.98	0.151		10	4.99	0.753	6"	0.78	.016	4.0		

COMPUTATION SUMMARY

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

LOCATION MAP

LEGAL: BLOCK C, MANDELL BUSINESS AND RESIDENTIAL ADDITION

ADDRESS: 400 MARQUETTE N.W.

NOTICE TO CONTRACTOR

1. An excavation/construction permit will be required before beginning any work within City right-of-way. An approved copy of these plans must be submitted at the time of application for this permit.

2. All work [illegible] on these plans to be performed, except as otherwise stated or provided hereon, shall be constructed in accordance with "Construction Documents for City-Wide Utilities and Cash Paving No. 31 "

3. [illegible] excavation, contractor must contact [illegible] for location of existing utilities.

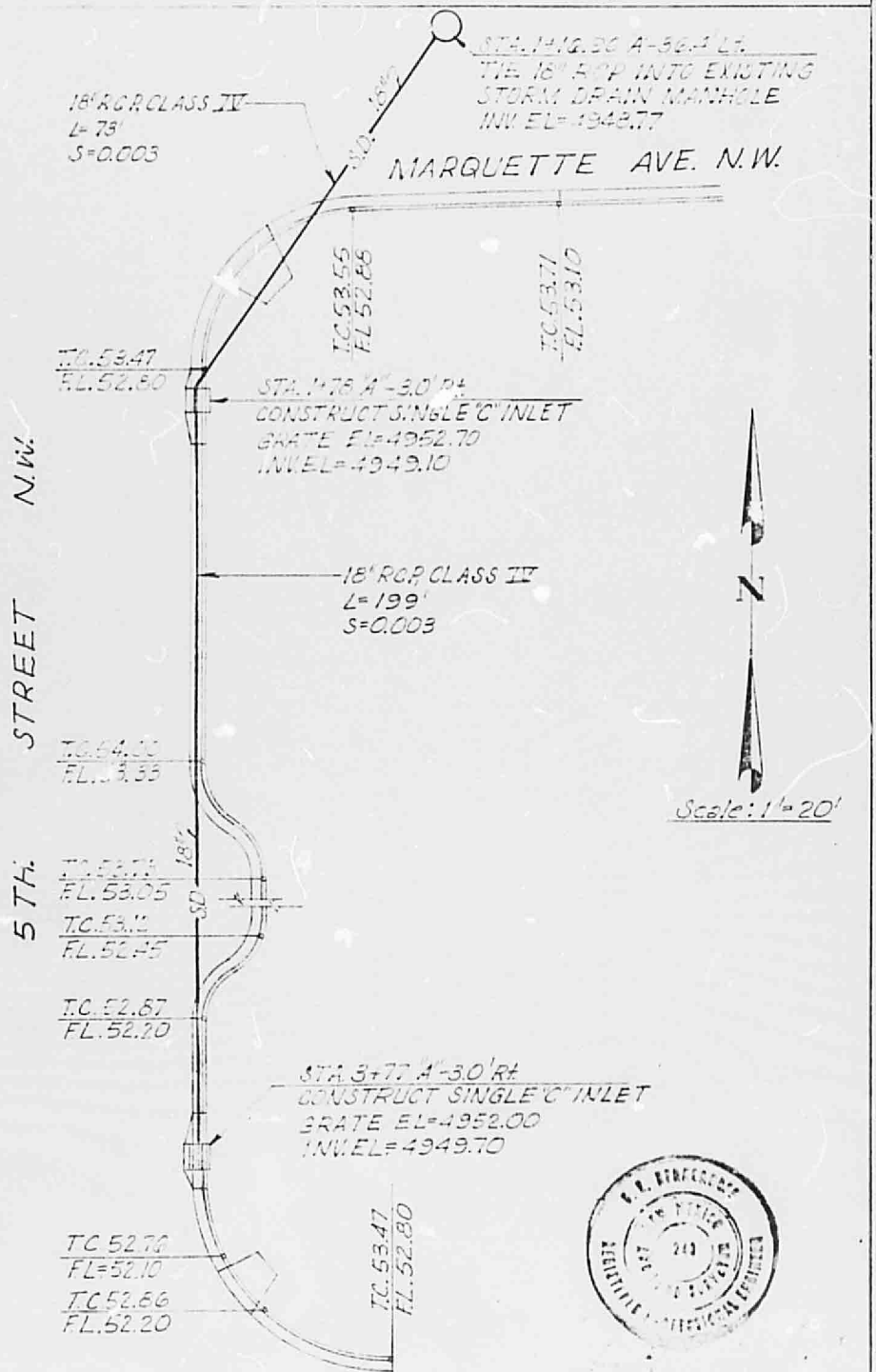
4. [illegible] construction, contractor shall excavate and verify the [illegible] at all obstructions. Should a conflict [illegible] the contractor shall notify the engineer so that the [illegible] of delay.

5. [illegible] ARTERIAL [illegible] street use.

APPROVALS	NAME	DATE	TITLE: CITY/COUNTY BUILDING STORM DRAIN LINE AND CATCH BASINS	
A.C.E./DESIGN				
INSPECTOR			PERMIT NO.	MAP
A.C.E./FIELD			SHEET 1 OF 5	NO. J-14

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY

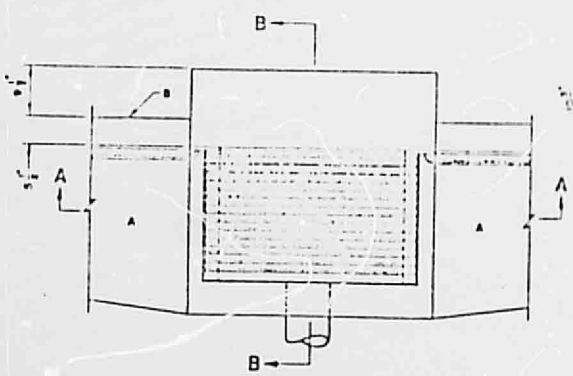


APPROVALS	NAME	DATE	TITLE: CITY / COUNTY BUILDING STORM DRAIN LINE AND CATCH BASINS

SUBMITTED | MAP

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



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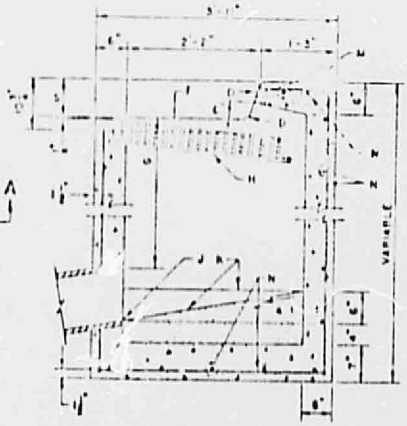

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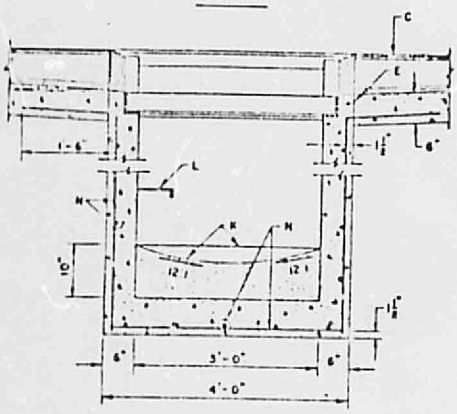

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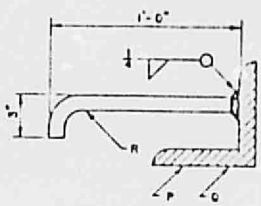


ANCHOR DETAIL

DETAIL 1: CATCH BASIN SINGLE "C"

GENERAL NOTES:

1. OUTLET PIPE SIZE PER DESIGN REQUIREMENT.

CONSTRUCTION NOTES:

A. FOR GUTTER TRANSITION, SEE DETAIL 2 BASIN LOCATION.
B. BACK OF CURB.
C. TOP OF CURB.
D. FLOWLINE.
E. CONSTRUCTION JOINT.
F. NORMAL GUTTER LINE.
G. 6" MIN. UNLESS OTHERWISE DIRECTED.
H. SEE DWG. # 8 FOR FRAME AND GRATING DETAILS.
J. INVERT PER DESIGN.
K. CONC. FILL, SEE NOTE E, DWG #1.
L. USE STANDARD MH STEPS, SEE DWG. S-9. FIRST STEP SHALL BE 18" FROM TOP OF GRATE AND SHALL PROTRUDE 7", SPACING AT 12" O.C. LAST STEP 18" MAX. FROM BOTTOM.
M. EXTEND NO. 4 REBARS 18" INTO CURB ON EACH SIDE OF CATCH BASIN.
N. NO. 4 BARS AT 6" O.C. EACH WAY.
O. SEE ANCHOR DETAIL, THIS DWG.
P. 2 - 3½" x 3½" x ¼" x 4'-0" FOR SINGLE GRATE C CATCH BASIN.
Q. 2 - 3½" x 3½" x ¼" x 7'-6" FOR DOUBLE GRATE C CATCH BASIN.
R. NO. 4 - 1'-3" ANCHOR AT 1'-9" O.C.
S. 6½" WHEN STANDARD C & G TYPE I IS USED ADJACENT, 7¼" WITH STANDARD C & G TYPE II.

APPROVALS	NAME	DATE
CE / DESIGN		
SPECTOR		
CE / FIELD		

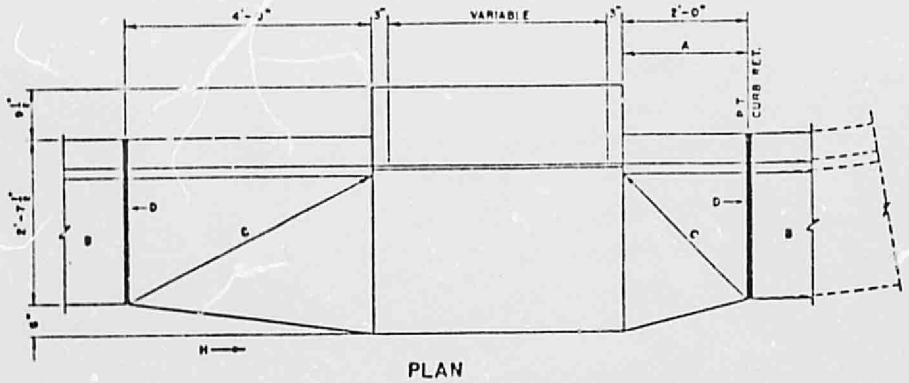
TITLE: CITY / COUNTY BUILDING STORM DRAIN LINE AND CATCH BASINS

PERMIT NO. | MAP

SHEET 7 OF 5

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



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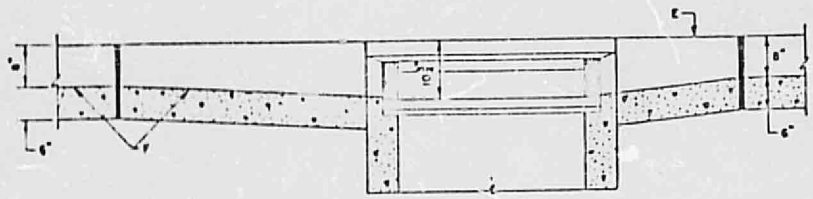


LONGITUDINAL SECTION
ALONG FLOW-LINE

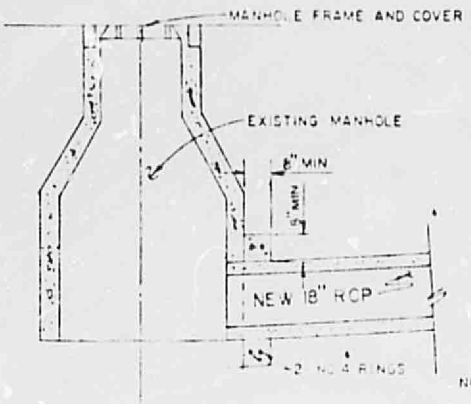
DETAIL 2: CATCH BASIN LOCATION

GENERAL NOTES:

1. DETAILS FOR PLACING CATCH BASINS, STANDARD CURB AND GUTTER.

CONSTRUCTION NOTES:

A. PROVIDE 4 FT. TRANSITION EITHER SIDE OF CATCH BASIN, WHEN INSTALLING AT LOW POINT OF CURB & GUTTER.
B. STANDARD CURB AND GUTTER.
C. STRAIGHT GRADE.
D. EXPANSION JOINT.
E. TOP OF CURB.
F. FLOWLINE.
G. FOR GRATING, SEE DETAIL NO 4
H. DIRECTION OF FLOW.



NOTE: BREAK MANHOLE TO ACCOMODATE NEW PIPE SIZE

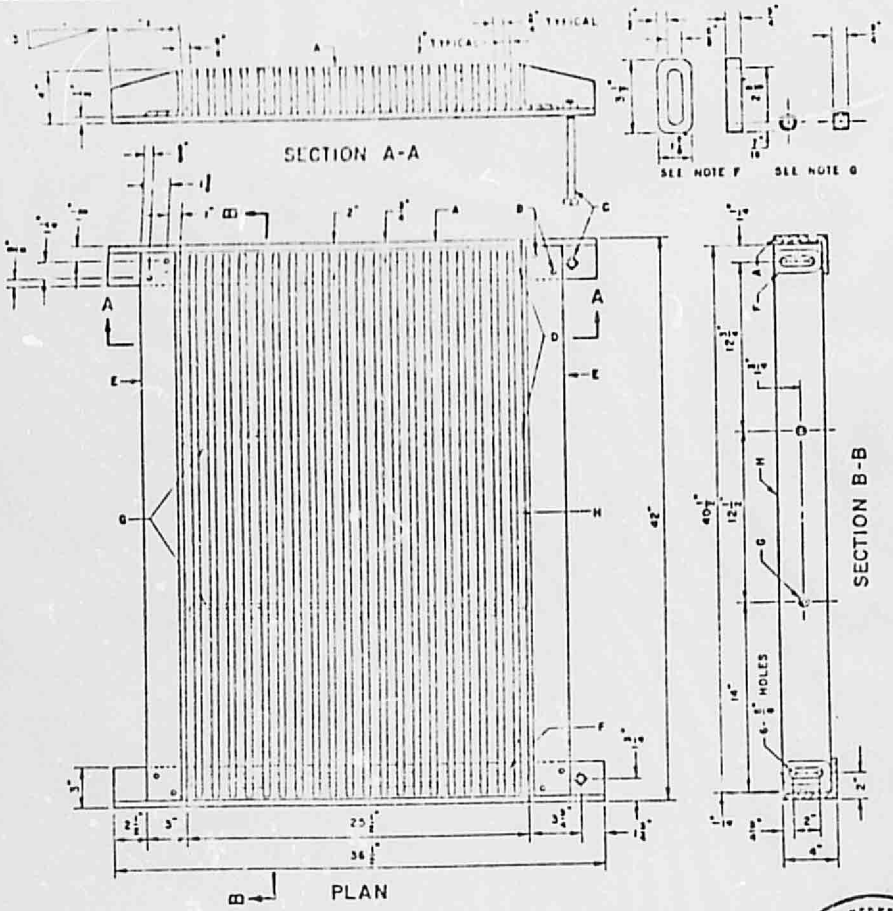
DETAIL 3: CONNECTION TO EXISTING MANHOLE

APPROVALS	NAME	DATE
ACE / DESIGN		
INSPECTOR		

TITLE: CITY / COUNTY BUILDING
STORM DRAIN LINE
AND CATCH BASINS

CITY OF ALBUQUERQUE

DRAINAGE FACILITIES WITHIN CITY RIGHT-OF-WAY



DETAIL 5: CATCH BASIN GRATING

R. E. KERKHOFF
NEW MEXICO
243
REGISTERED PROFESSIONAL ENGINEER

GENERAL NOTES:

1. ALL EXPOSED METAL PARTS SHALL BE PAINTED PRIOR TO ASSEMBLY. WELDING, MACHINING AND DRILLING SHALL BE DONE BEFORE PAINTING. ALL DIMENSIONS ARE FINISH DIMENSIONS.
2. NUTS USED TO SECURE GRATING BARS MAY BE HELD TIGHT BY PEENING THREADS OR OTHER SUITABLE MEANS IN LIEU OF TACK WELDS.
3. ALL PARTS SHALL BE OF STRUCTURAL GRADE STEEL EXCEPT SPACERS, WHICH MAY BE OF EITHER C.I. OR STEEL.
4. AFTER CLEANING SURFACE OF SCALE, RUST, ETC., GRATING, FRAME AND CENTER SUPPORT SHALL BE PAINTED WITH ONE SHOP COAT RED OXIDE, TWO FINISH COATS ALUMINUM PAINT (AASHO M69).
5. ANY DAMAGE TO PAINTING SHALL BE REPAIRED IN AN APPROVED MANNER.
6. FRAME MAY BE WELDED AND/OR RIVETED.

CONSTRUCTION NOTES:

A. 4" x 3" x ¼" x 36¼" L.
B. 2-¾" COUNTERSUNK RIVETS AT EACH CORNER, SEE NOTE 6.
C. ¾" x 8" BOLT WITH SQ. HEAD AND NUT AT OUTSIDE CORNER OF BASIN.
D. 6-¾" x 25⅛" STEEL RODS, 1 NUT AT EACH END, TACK WELD NUTS TO ADJACENT BARS AFTER ASSEMBLY, SEE NOTE 2.
E. 3½" x 3" x ¼" x 41" L.
F. END SPACERS.
G. STANDARD ½" PIPE INTERIOR SPACERS.
H. 20-¼" x 3½" x 40¼" BARS.

APPROVALS	NAME	DATE
A.C.E. / DESIGN		
INSPECTOR		
A.C.E. / FIELD		

TITLE: CITY / COUNTY BUILDING
STORM DRAIN LINE
AND CATCH BASINS

PERMIT NO
SHEET 5 OF 5

MAP NO J-14